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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,380	07/18/2003	Yi Yeol Lyu	3811-0122P	4059

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EXAMINER	
MOORE, MARGARET G	

ART UNIT	PAPER NUMBER
1712	

DATE MAILED: 05/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/621,380	LYU ET AL.	
	Examiner	Art Unit	
	Margaret G. Moore	1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3 to 13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3 to 13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Applicants' amendment and remarks filed 1/10/2005 have been entered and considered. They are not, however, sufficient to overcome the rejections of record.

3. Claims 1 and 3 to 13 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 to 17 of U.S. Patent No. 6,623,711. Although the conflicting claims are not identical, they are not patentably distinct from each other because of reasons noted in the previous officea ction.

Applicants state that claim 1 of the invention clearly sets forth components that are not present in claim 1 of '711 but they do not indicate what these components are. The Examiner cannot find components in the instant claims that are not present in the claims of '711. The component (1) in instant claim 1 is the same as (1) in '711 and the optional silane in '711 corresponds to component (3) and (4). See dependent claim 3 in '711 which further limits claim 1 and specifically shows these silane compounds. Applicants are reminded that this rejection is not over only claim 1 in '711 but claims 1 to 17. As can be seen from claim 3 in '711, claim 1 embraces each of the claimed components. As such this rejection is maintained.

For claim 3 (previous claim 2) applicants state that claim 2 was acknowledged to be patentable. This is not accurate. The Examiner clearly included claim 2 in this rejection, and indicated that it contained subject matter that was not taught or suggested *by the prior art*. This is different from an obviousness type double patenting rejection. As such this rejection also is maintained.

For newly added claims 4 to 9, note that adjusting the amount of each monomer in the composition would have been obvious and well within the skill of the ordinary artisan. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art (i.e. does not require undue experimentation).

For newly added claims 10 to 13, see claim 10 in '711 which teaches a Mw that meets these claims.

4. The obviousness type double patenting rejection over '822 has been withdrawn since the claims as amended do not embrace a reaction product of (4) and (1) alone. A silane of compound (3) is now required in claim 1 and this distinguishes the claim from the claims in '822.

5. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Jentsch et al. for reasons of record.

Applicants' traversal of this rejection is not understood. They state that R and the X groups are defined to cover formulations that are not disclosed by Jentsch. This is not true. X in the instant claims can be ethoxy and thus the tetraethylorthosilicate in Jentsch et al. meets claimed component (3). Also, R can be methyl, which is what is shown in Example 10. Note that the molar ratio in this example meets claim 4.

6. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Michalczyk et al. for reasons of record.

Applicants' traversal of this rejection is not persuasive. They state that patentees fail to disclose or suggest a polysiloxane polymer as set forth in claim 1. However the Examiner has shown 3 different star gel precursors in Michalczyk that meet the claimed compound of formula (1) and has cited the teaching of reacting such a compound with the claimed compound of formula (3) in the presence of a catalyst. The gel thus prepared meets the claimed siloxane based resin.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michalczyk et al.

The teaching on the bottom of column 6 fails to provide molar ratios of tetra-alkoxysilane to star gel precursors, but it does teach that the tetraalkoxysilanes are added in an effort to increase drying rates and lower brittleness. The skilled artisan would have been motivated from this teaching to adjust and/or optimize the amounts of each component in an effort to optimize the drying rate and brittleness of the resulting sol gel. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art (i.e. does not require undue experimentation).

9. Claims 1 and 4 are rejected under 35 U.S.C. 102(e) as being anticipated by Mechtel et al. for reasons of record.

Applicants' traversal of this rejection is not persuasive. Applicants state that Metchtel fail to teach a resin where a compound of formula 1 is reacted with a compound of formula 3 or 3 and 4. This simply is not true, as the Examiner cited the teaching of such a reaction, as well as drawing attention to the working examples. As such this rejection is maintained.

Note too that the working examples show molar ratios within the range of claim 4.

10. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Metchel et al.

Patentees do not specifically show molar ratios as claimed, but adjusting the molar ratio of each component in an effort to optimize crosslinking and the properties of the final component would have been well within routine experimentation for the skilled artisan. Note that column 4, lines 60 to 63, specifically teaches a combination of silanes meeting formulas (3) and (4). Also note that column 5, line 61, through column 6, line 5, teaches a wide range of amounts of each component that embraces the broad range of molar ratios claimed.

11. In conclusion, the Examiner simply does not agree with applicants' general assertions that the claimed siloxane resin is not found in the prior art. Perhaps applicants believe this to be true because the prior art prepares a cured siloxane composition from the reactants, but such a siloxane is not excluded from the claims. Along these lines, however, the Examiner notes that the *prior art* does not teach or suggest a molecular weight range as found in claims 10 or 11, because there simply is no motivation in the prior art to adjust or optimize the molecular weight. Also, as noted in the previous office action, the *prior art* fails to teach or suggest the composition of claims 3, 7 to 9, 12 and 13.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret G. Moore whose telephone number is 571-272-1090. The examiner can normally be reached on Monday to Wednesday and Friday, 10am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Margaret G. Moore
Primary Examiner
Art Unit 1712

mgm
4/28/05